

SHCHUKINA, Ye.N.

Ancient zone of weathering in the Altai Territory and its significance in determining the age and origin of the relief. Kora vyvetr.
259-271 '56. (MLRA 9:8)

(Altai Territory--Paleogeography)

(Altai Territory--Geology, Stratigraphic)

Yu. A. LAVRUSHIN and Ye. N. SHCHUKINA

"Data on the Bauxite-Bearing Possibilities of Yenisey Region" p.462

Mineralogy and Origin of Bauxites, Moscow, Izd-vo AN SSSR (otd. geologo-geograf. nauk) 1958, 488pp.

This collection of articles by various authors on the mineralogy and geochemistry of bauxites appeared as a result of 1955 conf. on the origin of bauxite (Chairman, Acad. N. M. Stakhov)

SHCHUKINA, Yelena Nikolayevna; NIKIFOROVA, L.V., otv.red.; ROMANOVA, L.A.
red.izd-va; SABITOV, A., tekhn.red.; KONDRAT'YEVA, M.A., tekhn.
red.

[Continental Tertiary sediments in the Central Urals] Kontinental'-
nye tretichnye otlozheniia Srednego Urala. Moskva, Gos.nauchn.-
tekhn.izd-vo lit-ry po gornomy delu, 1959. 189 p. (Akademiia nauk
SSSR. Geologicheskii institut. Trudy, no.17) (MIRA 13:2)
(Ural Mountains--Sediments (Geology))

SHCHUKINA, Ye.N.

Regularities in the distribution of Quarternary sediments in the Altai
and their stratigraphy. Trudy GIN no.26:127-164 '60. (MIRA 13:12)
(Altai Mountains--Geology, Stratigraphic)

S/229/63/000/002/002/002
E081/E141

AUTHORS: Shuygin, F.P., Engineer, and
Shchukina, Ye.N., Candidate of Technical Sciences

TITLE: Fatigue characteristics of aluminium alloys used in
ship construction

PERIODICAL: Sudostroyeniye, no.2, 1963, 47-51

TEXT: Fatigue tests up to about 10^7 cycles on the aluminium alloys AMg-5B, AMg-61 and Al-Zn-Mg, are described and discussed. The results are compared with those of previous workers to assess the effect of various types of welded joint on the fatigue strength. The effect of exposure to sea water on the fatigue strength is also measured. Conclusions: the alloy Al-Zn-Mg has most favorable fatigue properties, both welded and unwelded; the best type of angle welded construction investigated was a double sided continuous seam; welded construction in aluminium alloy is particularly sensitive to stress concentration; coatings which protect aluminium in ships against sea water also prevent any adverse effects on fatigue properties. There are 6 figures and 2 tables.

Card 1/1

SHUYGIN, F.P., inzh.; SHCHUKINA, Ye.N., kand.tekhn.nauk

Fatigue characteristics of aluminum alloys used in shipbuilding.
Sudostroenie 29 no.2:47-51 F '63. (MIRA 16:2)
(Aluminum alloys—Fatigue) (Shipbuilding materials)

SHIMANSKIY, Yulian Aleksandrovich, akademik (1883-1962); PERSHIN, V.I., red.;
ARSYUTKIN, A.A., nauchn. red.; DOROFYUK, S.K.,
nauchn. red.; SBOROVSKIY, A.K., nauchn. red.; SECHUKINA,
Ye.N., nauchn. red.; KLIORINA, T.A., red.; CHISTYAKOVA,
R.K., tekhn. red.; KOROVENKO, Yu.N., tekhn. red.

[Dynamic calculation of ship structures] Dinamicheskii ras-
chet sudovykh konstruktsov. Pod obshchei red. V.I. Pershina.
Leningrad, Sudpromgiz, 1963. 444 p. (MIRA 17:1)

BERZON, Inna Solomonovna; BOKANENKO, Lev Ivanovich; ISAYEV, Vasiliy
Semenovich; SHCHUKINA, Ye.P., red.; BRUZGULS, V.V., tekhn.red.

[Seismic studies on the Tuyuksu Glacier] Seismicheskie
issledovaniia na lednike Tuiuksu. Moskva, Izd-vo Akad.nauk
SSSR, 1959. 66 p. (Akademiia nauk SSSR. Mezhdunarodnyi
komitet po provedeniiu Mezhdunarodnogo geofizicheskogo goda
seismicheskie issledovaniia, no.2). (MIRA 13:2)
(Tuyuksu Glacier--Seismology--Observations)

PREOBRAZHENSKIY, V.S.; AVSYUK, G.A., prof., doktor geograf.nauk, otv.red.;
SHCHUKINA, Ye.P., red.; POLENOVA, T.P., tekhn.red.

[Kodar glacier area (Transbaikalia)] Kodarskii lednikovyi raion
(Zabaikal'e). Moskva, Izd-vo Akad.nauk SSSR, 1960. 71 p.
(IX razdel programmy MGG (gliatsiologiya), no.4).

(MIRA 13:12)

(Kodar Range--Glaciological research)

KUSHNIREVSKIY, Yu.V., otv.red.; MIRKOTAN, S.F., kand.fiz.-matem.nauk,
otv.red.; SECHUKINA, Ya.P., red.; GUS'KOVA, O.M., tekhn.red.

[Investigation of ionospheric irregularities; collection of
articles] Issledovaniia neodnorodnostei v ionosfere; sbornik
statei. V razdel programmy MGG (ionosfera). Moskva. No.4.
1960. 96 p. (MIRA 13:12)

1. Akademiya nauk SSSR. Mezhdunarodnyy komitet po prove-
deniyu Mezhdunarodnogo geofizicheskogo goda.
(Ionospheric research)

FEDOROV, Ye.P., doktor fiz.-matem.nauk, otv.red.; SHCHUKINA, Ye.P., red.;
RYLINA, Yu.V., tekhn.red.

[Preliminary results of studies on latitudinal variations and polar motions of the earth; collection of articles] Predvaritel'nye rezul'taty issledovaniy kolebaniy shirot i dvizheniya poliusov zemli; sbornik statei. VIII razdel programmy MGQ (shirot y i dolgoty). Moskva, No.1. 1960. 97 p.

(MIRA 13:12)

1. Akademiya nauk SSSR. Mezhdunarodnyy komitet po provedeniyu Mezhdunarodnogo geofizicheskogo goda.
(Latitude)

SYSOYEV, N.N., otv.red.; SHCHUKINA, Ye.P., red.; MARKOVICH, S.G.,
tekhn.red.

[Oceanological research; collection of articles] Okeanologicheskies issledovaniia; sbornik statei. X razdel programmy MGG (okeanologiya). Moskva. No.2. 1960. 125 p.

(MIRA 13:12)

1. Akademiya nauk SSSR. Mezhdunarodnyy komitet po provedeniyu Mezhdunarodnogo geofizicheskogo goda.
(Oceanographic research)

KALASHNIKOV, A.G., doktor fiziko-matemat.nauk, otv.red.; TROITSKAYA, V.A., kand.fiziko-matem.nauk, otv.red.; SHCHUKINA, Ye.P., red.; MAKUNI, Ye.V., tekhn.red.

[Short-period pulsations of the earth's electromagnetic field. Section III of the IGY program (geomagnetism)] Korotkoperiodicheskie kolebaniia elektromagnitnogo polia Zemli; sbornik statei. III razdel programmy MGG (geomagnetizm). Moskva. No.3. 1961. 114 p. (MIRA 14:2)

1. Akademiya nauk SSSR. Mezhduevdomstvennyy komitet po provedeniyu Mezhdunarodnogo geofizicheskogo goda. (Magnetism, Terrestrial)

KRASOVSKIY, V.I., doktor fiziko-matem. nauk, otv. red.; SHCHUKINA, Ye.P.,
red.; TIKHOMIROVA, S.G., tekhn. red.

[Spectral, electrophotometric, and radar investigations of
auroras and the airglow; collection of articles] Spektral'-
nye, elektrofotometricheskie i radiolokatsionnye issledova-
niia poliarnykh silanii i svecheniia nochnogo neba; sbornik
statei. IV razdel programmy MGG (poliarnye silaniia i svechenie
nochnogo neba). Moskva, Izd-vo Akad. nauk SSSR. No.6. 1961. 41 p.
(MIRA 14:12)

1. Akademiya nauk SSSR. Mezhdudomstvennyy komitet po provede-
niyu Mezhdunarodnogo geofizicheskogo goda.
(Auroras) (Night sky)

KOTLYAKOV, Vladimir Mikhaylovich; AVSYUK, G.A., otv. red.; SHCHUKINA, Ye.P., red.; VOLKOVA, V.Ye., tekhn. red.

[Collection of articles] Sbornik statei. Moskva, Izd-vo Akad. nauk SSSR. No.7. [The snow cover of Antarctica and its role in the contemporary glaciation of the continent] Snezhnyi pokrov Antarktidy i ego rol' v sovremennom oledenenii materika. 1961. 245 p. (MIRA 15:7)

1. Akademiya nauk SSSR. Mezhduevdomstvennyy komitet po provedeniyu Mezhdunarodnogo geofizicheskogo goda. IX razdel programmy MGG. Glatsiologiya. 2. Chlen-korrespondent Akademii nauk SSSR for Avsyuk).

(Antarctic regions--Snow)

YELSHIN, K., inzh. (Ufa); BRONSHTEYN, I., inzh. (Ufa); SHESTAKOV, V., slesar' (Khar'kov); D'YACHENKO, B., slesar' (Khar'kov); SHCHUKLIN, F., inzh.-tekhnolog (Izhevsk); KOCHMOLA, G., inzh.; KHRAMKOV, V., inzh.-konstruktor (Gus'-Khrustal'nyy); GREYSMAN, A. (Kaltan, Kemerovskaya obl.); SUDNIKOV, V.I. (Verkhniy Ufaley)

Advertising board. Izobr.i rats. no.9:34 S '62.

(MIRA 16:3)

1. Darnitskiy vagonoremontnyy zavod (for Kochmola).
(Technological innovations)

S/033/63/040/002/013/021
E001/E120

AUTHORS: Krotikov V.D., and Shchuko, O.B.

TITLE: On the thermal behavior of the Moon's surface layer during lunations

PERIODICAL: Astronomicheskii zhurnal, v.40, no.2, 1963, 297-303

TEXT: The problem of the Moon's surface layer thermal behavior is reduced to calculating the heating of the surface of a semi-infinite solid body which is being warmed periodically by the Sun and is radiating according to the Stephan-Boltzmann law. The present article describes the results of investigating this problem by means of a BESM-2 (BESM-2) electronic computer. As studies of the Moon's radio emission have shown, the single-layer model of the lunar surface agrees well with experimental data. Only a uniform structure of this surface layer is considered. The steady-state solution of the heat conductivity equation

$$\frac{\partial T}{\partial t} - a \frac{\partial^2 T}{\partial x^2} = 0$$

with corresponding initial and boundary conditions was found by Card 1/4

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On the thermal behavior of the ...

S/033/63/040/002/013/021
E001/E120

the method of finite differences. The values of the surface temperature and depth distribution of temperature were calculated, assuming the solar constant A_0 to be $0.033 \text{ cal/cm}^2 \cdot \text{sec}$, for different values of parameter $\gamma = (K\rho c)^{-1/2}$

where K is thermal conductivity coefficient, ρ is density, and c is thermal capacity. The results of calculations are tabulated and presented graphically. The temperatures of the subsolar point T_m , mean nightly temperature T_n , constant component T_0 and amplitude of the first harmonic T_1 , as functions of parameter γ are presented in the curves of Fig.3. The function of temperature distribution over the lunar surface is described by the formula:

$$T_{\text{surf}}(\varphi, \psi, t) = T_0 \cos^{1/5} \psi + T_1 \cos^{1/3} \psi \cos(\Omega t - \varphi - \varphi_1) + \\ + T_2 \cos^{0.27} \psi \cos(2\Omega t - 2\varphi + \varphi_2) - \\ - T_3 \cos^{7/16} \psi \cos(3\Omega t - 3\varphi - \varphi_3) - \dots$$

where T_n and φ_n are values of amplitudes and phases of harmonics for the center of the lunar disk; Ω is lunation

Card 2/4

On the thermal behavior of the ...

S/033/63/040/002/013/021
E001/E120

frequency; φ is longitude and ψ is latitude. The results of calculations were compared with experimental data taken from the Sinton thermal map of the Moon (Lowell. Obs. Bull., v.5, no.1, 1961) for infrared wavelengths, and the agreement between calculated and experimental data was found satisfactory. V.S. Troitskiy is thanked for the supervision of the present study. There are 5 figures and 1 table.

ASSOCIATION: Radiofizicheskiy institut Gor'kovskogo gos.
universiteta im. N.I. Lobachevskogo
(Radiophysical Institute of the Gor'kiy State
University imeni N.I. Lobachevskiy).

SUBMITTED: March 13, 1962

Card 3/4
3

L 34470-65 FBD/EWT(1)/EWG(v)/EEC-4/EEC(t) Po-4/Pe-5/Pae-2/Pi-4 GW/WS-4

ACCESSION NR: AP5006010

S/0033/65/042/001/0145/0147

AUTHOR: Krotikov, V. D.; Shchuko, O. B.

TITLE: The averaging effect of an antenna directional pattern in measuring lunar radio emission

SOURCE: Astronomicheskii zhurnal, v. 42, no. 1, 1965, 145-147

TOPIC TAGS: lunar temperature, antenna directional pattern, lunar radio emission

ABSTRACT: V. S. Troitskiy's formula for determining the effective lunar temperature at various wavelengths (Astron. zh., [v.] 31, 79, 1954) is modified to take into account the averaging effect of the antenna directional pattern. It is assumed 1) that the antenna directional pattern is a body of revolution, 2) that the axis of the diagram passes through the center of the Moon, and 3) that side lobes are absent. The dependence of the ratio of averaging coefficients on pattern bandwidth σ is calculated for various wavelengths in the 0.1—10-cm band and for $\epsilon = 3, 1.5$, and 1.2. At $\sigma \geq 40'$, the averaging effect can be neglected. On the basis of the experimental data, the characteristic parameter δ_1 can be determined more precisely. Orig. art. has: 1 figure, 1 table, and 2 formulas. [JR]

Card 1/2

L 34470-65

ACCESSION NR: AP5006010

ASSOCIATION: Gor'kovskiy nauchno-issledovatel'skiy radiofizicheskiy institut
(Gorky Scientific Research Institute of Radio Physics)

SUBMITTED: 03Feb64

ENCL: 00

SUB CODE: EC,AA

NO REF SOV: 002

OTHER: 000

ATD PRESS: 3213

Card 2/2

KROTIKOV, V.D.; SHCHUKO, O.B.

Allowance for the averaging effect of the directional diagram of
the antenna in lunar radio emission measurements. Astron. zhur.
42 no.1:145-147 Ja-F '65. (MIRA 18:2)

I. Gor'kovskiy nauchno-issledovatel'skiy radiofizicheskiy institut.

L 10311-63 BDS
ACCESSION NR: AP3000888

S/0179/63/000/002/0131/0132

AUTHOR: Shchuko, S. D. (Gor'kiy) 46

TITLE: A dynamic model of a restrained clockwork without start-and-stop motion of the escape wheel.

SOURCE: AN SSSR. Izv. Otd. tekhn. nauk. Mekhanika i mashinostroyeniye, no. 2, 1963, 131-132

TOPIC TAGS: clockwork, non-stop escape wheel, non-stop escapement.

ABSTRACT: This theoretical paper examines the dynamic model of a restrained clockwork motion without any start-stop motion of the escape wheel on a simplified model with 2 degrees of freedom. This study constitutes a generalization of the model previously investigated by N. N. Bautin (Inzhenernyy sbornik, v. 16, 1953; Adad, nauk SSSR., Izv., Otd. tekhn. nauk, no. 10, 1955). The escape wheel is represented by an infinite straight-sided toothed rack that is caused to move by a constant moment P. All geometric and impulse-transfer characteristics are assumed to be symmetrical with respect to the equilibrium positions of the balance unit. In the study of the period and amplitude of the periodic solution,

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L 10311-63

ACCESSION NR: AP3000888

the model investigated here (Fig.1) has 2 degrees of freedom, and its phase space is 4-dimensional. However, inasmuch as the escape wheel and the balance unit are kinematically coupled during the impulse transfer, the post-impulse coordinates and velocities of the balance unit and the escape wheel coincide. The investigation of the phase space of the system can, therefore, be reduced to the transformation of the semi-straight-line of the post-impulse states into itself. Analytical expressions are derived for the oscillatory period and its stability. There are 9 numbered equations and 1 figure.

ASSOCIATION: none

SUBMITTED: 27Dec62 DATE ACQ: 12Jun63

ENCL: 01

SUB CODE: MD,CG

NR REF SOV: 002

OTHER: 000

Card 2/32

L 53921-65

ACCESSION NR: AP5017359

UR/0239/64/050/011/1329/1334

AUTHOR: Vinnikov, Ya. A.; Zhinkin, I. L.; Shchukolyukov, S. A.

9
B

TITLE: Activity of enzymes of the succinoxidase system in mitochondria of neurons of the auditory and visual cortex and of the cerebellum under conditions of relative rest and on adequate stimulation

SOURCE: Fiziologicheskiy zhurnal SSSR, v. 50, no. 11, 1964, 1329-1334

TOPIC TAGS: experiment animal, brain, light biologic effect, acoustic biologic effect, enzyme, neurology

Abstract: A histochemical study was carried out of the enzymes of the succinoxidase system of mitochondria of neurons of the auditory and visual cortex and of the cerebellum, using sections of the brain and cerebellum of guinea pigs that had been subjected to the action of sound of 95 decibels at a frequency of 300 or 1,500 cycles for 15-30 min or 1-6 hrs. The results were compared with those obtained on brain sections of guinea pigs that had not been subjected to a sound stimulus. In another series of experiments, the brain sections of guinea pigs subjected to the action of bright intermittent light for 30 min were studied. Guinea pigs adapted to darkness were used as controls. Significant changes in the enzyme activity of mitochondria

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L 53921-65

ACCESSION NR: AP5017359

of neurons of the cortex were found on application of the stimuli, but no changes produced by the stimuli were detected in mitochondria of neurons of the cerebellum. Orig. art. has 6 figures.

ASSOCIATION: Institut Evolyutsionnoy fiziologii im. I. M. Sechenova AN SSSR, Leningrad (Institute of Evolutionary Physiology, AN SSSR)

SUBMITTED: 05May63

ENCL: 00

SUB CODE: LS

NO REF SOV: 011

OTHER: 013

JPRS

Qac
Card 2/2

Chemistry - Organic

B.I.R.

6294* Investigation of the Isomerization and Polymerization of Dimethylvinylcarbinol Depending on pH of the Reagent. (In Russian.) A. I. Lebedeva and L. L. Shelukov.

Khimiya Zhurnal Obshchey Khimii, 21(83), June 1951, p. 1132

Data are tabulated and charted.

Chemical Abst.
Vol. 48 No. 9
May 10, 1954
Organic Chemistry

4

② Chem

/ Synthesis and properties of allylsilanes: 1-naphthyltri-
allylsilane, cyclohexyltri-allylsilane, butyltri-allylsilane, and
tributylallylsilane. A. D. Petrov and L. L. Shchu-
kovskaya. Bull. Acad. Sci. U.S.S.R., Div. Chem. Sci.
1952, 537-8 (Engl. translation).—See C.A. 47, 3792g.
H. L. H.

may

U.S.S.R. Chemistry - Organosilicon Compounds

21 Sep 52

"The Synthesis and Properties of Symmetrical Acetylenic Disilanes," A.D. Petrov, Dokl
Akad. Nauk SSSR, and L. N. Chechukovskaya, Inst Org. Chem, Acad. Sci. USSR

Dokl. Akad. Nauk SSSR, Vol. 86, No. 3, pp. 551-553

$(CH_3)_3SiC\equiv CSi(CH_3)_3$ (I), $(C_2H_5)_3SiC\equiv CSi(C_2H_5)_3$ (II), and $(n-C_4H_9)_3SiC\equiv CSi(n-C_4H_9)_3$ (III) were synthesized from H_2 , C_2H_2 , and acetylene using the appropriate compounds of the following: $(CH_3)_3SiCl$, $(C_2H_5)_3SiBr$, and $(n-C_4H_9)_3SiCl$ for reaction with the symmetrical complex formed initially. The hydrogenation of II was performed over Raney nickel and in an autoclave under heat and pressure.

PA 24747

SHCHUKOVSKAYA, L. L.

✓ Synthesis and properties of organosilicon esters of mono-
and dibasic acids. D. N. Andreev and L. L. Shchukov-
skaya. *Bull. Acad. Sci. U.S.S.R., Div. Chem. Sci.* 1955,
121-4 (Engl. translation).—See C.A. 48, 3244i. H. L. H.

SHCHUKOVSKAYA, L.

3

Chemical Abst.
Vol. 48 No. 6
Mar. 25, 1954
Organic Chemistry

Synthesis and properties of organosilicon esters of mono and dibasic acids. D. N. Andreev and L. L. Shchukovskaya. *Izv. Akad. Nauk S.S.S.R., Khim. Neorg. Soedin.* 1953, 9, 1000. Heating 20 g. Et_3SiCl with 53 g. PrCO_2H 85 hrs. gave 63% $\text{PrCO}_2\text{SiEt}_3$; a 90% yield resulted from 37 g. Et_3SiCl and 93 g. PrCO_2Na in boiling xylene in 20 hrs.; the product b_p 85-7°, n_D^{20} 1.4280, d_4^{20} 0.8350. Similarly Et_3SiCl and $\text{iso-BuCO}_2\text{H}$ in 40 hrs. gave 26% $\text{iso-BuCO}_2\text{SiEt}_3$, b_p 92.5-3.5°, n_D^{20} 1.4268. Heating 19 g. Et_3SiCl with 16 g. enanthic acid 40 hrs. gave 9 g. Et_3SiO_2 , 3 g. $(\text{Et}_3\text{SiO})_2\text{O}$, and 2 g. $\text{C}_8\text{H}_{15}\text{CO}_2\text{SiEt}_3$, b_p 127.5-9.0°, n_D^{20} 1.4303. Heating 20 g. Et_3SiCl with 12 g. $(\text{CH}_3\text{CO}_2\text{H})_2$ 107 hrs., filtration of the unreacted acid, and distn. gave some Et_3SiOH and $(\text{CH}_3\text{CO}_2\text{H})_2$ and a small amt. of $(\text{CH}_3\text{CO}_2\text{SiEt}_3)_2$, b_p 172.5°, n_D^{20} 1.4450, d_4^{20} 0.9518; the low yield was caused by the necessity of an alkali wash before distn. Similarly adipic acid gave, in 60 hrs., 28% $\text{bis}(\text{trimethylsilyl})$ adipate, b_p 153-4°, n_D^{20} 1.4275, d_4^{20} 0.9589; $\text{bis}(\text{triethylsilyl})$ adipate, obtained similarly in unstated yield, b_p 231-2°, n_D^{20} 1.4475, d_4^{20} 0.9490. Me_3SiCl and azelaic acid in 92 hrs. gave unstated yield of $\text{bis}(\text{trimethylsilyl})$ azelaate, b_p 180-1°, n_D^{20} 1.4310; similarly was obtained 54% $\text{bis}(\text{triethylsilyl})$ azelaate, b_p 240-1°, n_D^{20} 1.4500, d_4^{20} 0.9436. All the esters are readily hydrolyzed, the esters of dicarboxylic acids being especially sensitive. The Et derivs. are more stable than Me analogs.
G. M. Kosolapoff

SHCHUKOVSKAYA, L.L.

) Synthesis and properties of mono- and disubstituted silicacetylenic hydrocarbons. A. D. Petrov, L. L. Shchukovskaya, and Yu. P. Egorov (N. D. Zelinskii Inst. Org. Chem., Acad. Sci. U.S.S.R., Moscow). *Doklady Akad. Nauk S.S.S.R.* 93, 283-8 (1953); *Ch. C.A.* 47, 12225h.

— $\text{MeC}\equiv\text{CH}$ (13.5 l.) treated with EtMgBr (from 43 g. EtBr) with ice cooling, kept 4-5 hrs. at room temp., 44 g. EtSiBr , added, and the mixt. stirred 5 hrs. and refluxed 4 hrs. gave 79% $\text{Et}_2\text{SiC}\equiv\text{CMe}$ (I), b. 109.5-70.5°, n_D^{20} 1.4485, d_4^{20} 0.8020, Raman spectrum (cm^{-1}) 310(3), 368(4), 402(4), 498(1), 548(1), 606(5), 676(1), 712(2), 740(3), 974(4), 1006(3), 1025(3), 1236(4), 1380(5), 1418(4), 1486(5), 2188(10), 2322(2), 2857(1), 2885(8), 2891(4), 2920(8), and 2962(5). Hydrogenation over Pd gave Et_2SiPr , b. 170°, n_D^{20} 1.4308, d_4^{20} 0.7725. I (8 g.) and 1.6 g. Na heated in a sealed tube 16-18 hrs. at 170-220° gave some 2 g. higher-boiling product, b. 162-8°, n_D^{20} 1.4718, d_4^{20} 0.8443, possibly the cyclic dimer. Similarly were prepd.: $\text{Me}_2\text{SiC}\equiv\text{CMe}$, b. 99-100°, n_D^{20} 1.4091, d_4^{20} 0.7581; $\text{Me}_2\text{SiC}\equiv\text{CPh}$, b. 87.5°, n_D^{20} 1.5284, d_4^{20} 0.8961, Raman spectrum 200(4), 218(3), 226(3), 300(1), 342(3), 394(4), 530(5), 560(1), 588(6), 623(4), 648(5), 674(1), 699(3), 748(5), 802(3), 941(3), 998(2), 1023(4), 1117(2), 1154(4), 1178(7).

1248(10), 1418(2), 1250(1), 1443(2), 1480(4), 1596(10), 2160(20), 2701(8), 2960(6), and 3060(10); $\text{Et}_2\text{SiC}\equiv\text{CPh}$, b. 132-3.3°, n_D^{20} 1.5259, d_4^{20} 0.8984, Raman spectrum 297(2), 408(2), 423(3), 459(1), 537(5), 568(1), 623(5), 754(3), 828(5), 857(1), 970(3), 998(20), 1008(2), 1023(2), 1117(4), 1154(4), 1175(7), 1217(10), 1234(3), 1480(4), 1415(3), 1489(1), 1596(15), 2160(20), 2882(6), 2910(3), 2960(4) and 3060(15). The acetylene link thus shows a Raman frequency ranging from 2186 to 2160 (in conjugated Ph derivs.). The cyclic dimer mentioned above probably has a cyclobutane ring since it lacks the 2999 and 3076 lines, which are characteristic of a $-\text{CH}_2-$ group. Treatment of MeMgI (from 150 g. MeI) with C_2H_2 at 3 atm. initially, then heating in an autoclave to 45°, treatment of the product with 45 g. Et_2SiCl and 5 g. HgCl_2 in Et_2O and again heating under C_2H_2 pressure to 60-80° 5-6 hrs., gave 10% $\text{Et}_2\text{SiC}\equiv\text{CH}$, b. 59-61°, n_D^{20} 1.4347, d_4^{20} 0.7918. Me_2SiCl failed to react with $\text{Me}_2\text{C}(\text{OH})\text{C}\equiv\text{CH}$ (II). To the Grignard complex from 17 g. II, 44 g. EtBr , and 10 g. Mg was added. 44 g. Me_2SiCl , and the mixt. refluxed 6 hrs., evapd., heated 4 hrs. on a steam bath, and treated with H_2O , to yield 23 g. $\text{Me}_2\text{C}(\text{OSiMe}_2)\text{C}\equiv\text{CH}$, b. 94-6°, m. 42-2.5°. Similarly was prepd. $\text{Me}_2\text{C}(\text{OSiEt}_2)\text{C}\equiv\text{CH}$, b. 121.8°, n_D^{20} 1.4557, d_4^{20} 0.8638.

G. M. Kozolapov

SHCHUKOVSKAYA, L. L.

"Synthesis and Reactions of Unsaturated Silicon Hydrocarbons."
Cand Chem Sci, Leningrad State U, Leningrad, 1954. (RZhKhim, No 22,
Nov 54)

Survey of Scientific and Technical Dissertations Defended at USSR
Higher Educational Institutions (11)

SO: Sum. No.521, 2 Jun 55

SHCHUKOVSKAYA, L. L.

Behavior toward chemical reagents of the silicon-carbon bond in α -alkynyl- and β -alkenylsilanes. A. D. Petrov and L. L. Shchukovskaya. *Zhur. Obshchei Khim.* 25, 1128-30 (1955). — The reaction of R_3SiX with acetylenic Grignard reagents involves the etherate of the latter; the silicon reagent reacts with the Et_2O , so that an excess of $RMgX$ is necessary to complete the reaction, or the reaction must be run without Et_2O . The Si-C link in acetylenic silanes is cleaved under mild hydration conditions, but is quite stable to bromination, being able to add 2 or 4 Br atoms. In contrast to $(i)CMgX$, and $HC\equiv CNa$, $ArC\equiv CMgX$ react readily with $SiCl_4$. Allylic silanes undergo cleavage under conditions of bromination or action of $PhLi$. To $(i)CMgBr$, from 20 g. Mg, 94 g. $EtBr$, and C_3H_4 in Et_2O was added 48 g. Bu_2SiCl_2 ; the mixture refluxed 6 hrs., freed of Et_2O and heated 26 hrs. at $140-60^\circ$ gave, after aq. treatment, 32% Bu_2SiOEt , b_p 128-8°, n_D^{20} 1.4368, d_4^{20} 0.8217, and 52% $(Bu_2Si)_2O$, b_p 184-6°, n_D^{20} 1.4479, d_4^{20} 0.8332. Similar reaction of 60 g. Mg, 281 g. $EtBr$, C_3H_4 , and 67 g. Bu_2SiCl_2 in Et_2O gave 43% Bu_2SiOEt and 13% $(Bu_2Si)_2O$, b_p 215-18°, n_D^{20} 1.4598, d_4^{20} 0.8339. Similar reaction with 60 g. Mg, 234 g. $EtBr$, C_3H_4 , 44 g. Bu_2SiF_2 , and 2 g. Cu_2Cl_2 , the reaction being completed by 8.5 hrs. at $165-70^\circ$, gave 48.7% Bu_2SiOEt and 22.3% $(Bu_2Si)_2O$, b_p 210-18°, n_D^{20} 1.4597; a modification in which after the prepn. of $(i)CMgBr$, the Et_2O was decanted and replaced with petr. ether, gave 40.6% Bu_2SiOEt and 33% $(Bu_2Si)_2O$, b_p 217-19°, d_4^{20} 0.8276, n_D^{20} 1.4595. To $EtMgBr$ from 15 g. Mg and 100 g. $EtBr$ in dry C_3H_4 (cf. Andrianov, *C.A.* 41, 701c) was added C_3H_4 , over 12 hrs. yielding a purple

layer, which was then treated with 39 g. Bu_2SiF_2 as above, yielding some Bu_2SiOEt and 15-18% $(Bu_2Si)_2O$, b_p 210-12°. Similar reaction of 22.5 g. Mg, 100 g. $EtBr$, C_3H_4 , and 40 g. $(C_4H_9)_2SiCl_2$ with 2 g. Cu_2Cl_2 gave 51% $(C_4H_9)_2SiOEt$, b_p 191-2°, n_D^{20} 1.4442, d_4^{20} 0.8272 and 25% $[(C_4H_9)_2Si]_2O$, b_p 277-9°, n_D^{20} 1.4574, d_4^{20} 0.8385; a reaction of 7.5 g. Mg, 37 g. $EtBr$, C_3H_4 , and 30.5 g. $(C_4H_9)_2SiF_2$ gave 33% $(C_4H_9)_2SiOEt$ and 46% $(C_4H_9)_2Si_2O$. When $(i)CMgBr$ was prepd. from 30 g. Mg, 140 g. $EtBr$, and C_3H_4 in Et_2O , and the solvent was decanted and replaced with petr. ether, and the mixt. was treated with 2 g. Cu_2Cl_2 and 31.5 g. $(C_4H_9)_2SiF_2$, the usual treatment gave 35% $(C_4H_9)_2SiOEt$ and 30.7% $[(C_4H_9)_2Si]_2O$, b_p 303-5°, n_D^{20} 1.4603, d_4^{20} 0.8354. Reaction of 11 g. Mg, 53 g. $EtBr$, C_3H_4 in Et_2O with 40 g. Ph_2SiF_2 , with distr. of the solvent and heating the residue 9 hrs. to 100° gave 13% $(Ph_2Si)_2O$, $m.$ 155° (from petr. ether). Reaction of 12 g. Mg, 61 g. $CH_2=CHCH_2Br$, and 35 g. Ph_2SiF_2 in Et_2O gave 74% $Ph_2SiCH_2CH=CH_2$, $m.$ 91-2° (from $EtOH$); this (4.6 g.) added to $PhLi$ from 0.5 g. Li and 5 g. $PhBr$ and the mixt. after 23 hrs. at room temp. and 4 hrs. on a steam bath gave an unstated amt. of Ph_2SiOH , $m.$ 149-60°. Addn. of 21 g. Br in CCl_4 to 17.95 g. Et_2SiCl_2CMe in 4 hrs. gave 12 g.

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Et_3SiCBr , CB_7Me , b.p. 148.5-8.5°, n_D^{20} 1.5358, d_4^{20} 1.4176; further bromination with 10.5 g. Br at 40-50° gave 15 g. $Et_3SiCBr_2CB_7Me$, b.p. 164-6°, n_D^{20} 1.5595, d_4^{20} 1.6768. Heating 16.4 g. $Me_2SiC:CPh$ with 1 g. $HgSO_4$, 60 ml. 80% MeOH, and 2 drops H_2SO_4 , 4.5 hrs. at 60° gave 5.5 g. AcPh; $Et_3SiC:CPh$ also gave AcPh under these conditions. Reaction of 5 g. Mg, 22 g. EtBr, 7 l. MeC_2CH , and 28 g. $PhSiF$ in Et_2O gave 65% $Ph_2SiC:CMc$, m. 113-14° (from EtOH). Reaction of 5 g. Mg, 30 g. EtBr, 22.4 g. PhC_2CH , and 50 g. $SiCl_4$, completed by 4 hrs. on a steam bath gave 22.6% $CH_3SiC:CPh$, b.p. 132-5°, n_D^{20} 1.5537, d_4^{20} 1.2871. Also in *J. Gen. Chem. U.S.S.R.* 25, 1083-8 (1955) (Engl. translation).
G. M. Kosolapoff

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SHCHUKOVSKAYA, L. L.

✓ Addition of polyhalosilanes and allylhydrosilanes to compounds which contain a triple bond. L. L. Shchukovskaya, A. D. Petrov, and Yu. P. Burov (*Izv. Akad. Nauk SSSR, Khim. Ser.*, 1958, 1175-1176; *Zhur. Obshch. Khim.*, 26, 3338-41 (1958); cf. C.A. 47, 12225h). Heating 13 g. $\text{Me}_3\text{SiC}\equiv\text{CMe}$ with 60 g. SiHCl_3 and 2.8 g. Bz_2O_2 in an autoclave 24 hrs. at 100° gave $\text{MeCH}:\text{C}(\text{SiMe}_3)_2\text{SiCl}_2$, b_p 117.5-19°, n_D^{20} 1.4783, d_4^{20} 1.1426, and a putative 1:2 adduct, b_p 167-70°, 1.5041, 1.3630. Each of these was treated with excess MeMgBr , yielding unstated amts. of $\text{MeCH}:\text{C}(\text{SiMe}_3)_2$, b_p 172-3°, 1.4518, 0.8028, Raman spectrum (cm^{-1}), 162(4), 194(4), 230(4), 270(5), 310(1), 396(6), 502(3), 618(3), 845(10), 688(5), 736(0), 762(0), 845(3), 1040(1), 1117(2), 1252(3), 1267(2), 1364(4), 1416(3), 1447(4), 1570(4), 2850(3), 2863(3), 2910(10), 2958(8), 2970(4). Heating 13.5 g. $\text{Me}_3\text{SiC}\equiv\text{CPh}$ with 20 g. MeSiHCl_2 and 0.1 g. Pt-C catalyst 28 hrs. at 200° gave 19 g. $\text{PhCH}:\text{C}(\text{SiMe}_3)_2\text{SiMeCl}_2$, b_p 144°, n_D^{20} 1.5204, d_4^{20} 1.0693, which with MeMgBr gave $\text{PhCH}:\text{C}(\text{SiMe}_3)_2$, b_p 146-7°, n_D^{20} 1.5020, d_4^{20} 0.8775, Raman spectrum, 168(2), 191(7), 225(4), 242(5), 318(4), 343(5), 450(6), 570(3), 605(3), 620(10), 695(5), 749(3), 771(1), 845(4), 900(4), 939(3), 1000(10), 1030(6), 1076(0), 1124(1), 1153(4), 1174(7), 1218(5), 1250(4), 1312(7), 1415(4), 1447(3), 1553(6), 1576(4), 1603(10), 2845(4), 2897(10), 2962(9), 3055(9). Heating 10 g. Et_3SiH and 7.5 g. $\text{Me}_3\text{C}(\text{OH})\text{C}\equiv\text{CH}$ with 0.1 g. Pt-C in autoclave as above 18-20 hrs. at 210° gave a 1:1 mixt. of $\text{Me}_3\text{C}(\text{OH})\text{C}(\text{CH}_3)_2\text{SiEt}_3$, b_p 108-10°, b_m 217-18°, 1.4622, 0.8628 [Raman spectrum: 225(4), 460(0), 542(3), 585(6), 638(1), 670(2), 726(2), 734(2), 772(5), 805(2), 912(0), 928(3), 975(4), 1010(4), 1022(3), 1100(1), 1235(5), 1318(6), 1410(2), 1430(4), 1465(6), 1626(5), 2818(2), 2890(10), 2910(8), 2960(5), 2970(8), 3025(2)].

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L.L. Shehukova, A.D. Petrey and Y.P. Egorov
and 1-methyl-3-trichlorsilyl-4-(1-trichlorsilylvinyl)-1-cyclo-
hexene, b_p 205.5-6°, 1.4954, 0.8871. The reaction run as
above but at 160-70° gave only the former product. The
alc. heated with KHSO₄ gave 100% 2-methyl-3-trichloro-
silyl-1,3-butadiene, b_p 91-1.5°, 1.4715, 0.8145, Raman
spectrum 488(5), 585(6), 643(0), 725(1), 803(2), 832(3),
890(3), 973(5), 1018(8), 1118(0), 1240(3), 1313(10), 1380(4),
1417(4), 1470(4), 1571(8), 1623(20), 1660(3), 2881(9),
2909(6), 2965(6), 2995(3), 3080(5). This heated with
(Me₂CO)₂ to 130° readily gave a polymeric oil with mol. wt.
about 9000, while under polymerization at high pressure a
rubber-like polymer was obtained. G. M. Kosolapoff

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Sadukh-Zade, L.L.

20-3-28/59

AUTHORS

Petrov, A.D., Corresponding Member, AN ^{USSR} A, Shchukovskaya, L.L.,
Sadykh-Zade, S.I., Yegorov, Yu.P.

TITLE

The Synthesis and Dehydration of Unsaturated Silicon Containing Alcohols.

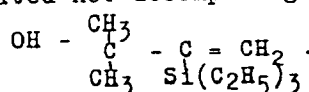
(Sintez i degidratatsiya nepredel'nykh kremniysoderzhashchikh spirtov - Russian)

PERIODICAL

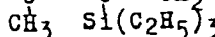
Doklady Akademii Nauk SSSR, 1957, Vol 115, Nr 3, pp 522-525 (U.S.S.R.)

ABSTRACT

It is known that the character of alcohol dehydration is determined by the structure and nature of its alcohol group. This is easiest in the case of the tertiary, which is followed by the secondary and most difficult it is in the case of the primary ones. In the case of silicon containing alcohol the influence of this element is added. It was shown that the alcohols with a β -position of the alcohol group with regard to Si suffer a stronger or slighter β -decay, the saturated as well as the unsaturated alcohols, independently of their structure, besides dehydration. The unsaturated alcohols with a γ -position of the alcohol group as well as the not decomposing alcohols with a β -position of this group which are investigated in the present paper are studied only to a very small extent. Formulae of the first of such alcohols are given, the dehydration of which was not yet studied. The first unsaturated not decomposing alcohol with a β -position of the OH-group is



Its dehydration



Card 1/2

with KHSO_4 took place very easily and yielded the first silicium

The Synthesis and Dehydration of Unsaturated Silicon 20-3-28/59
Containing Alcohols.

analogue of the methylisopren. The authors then synthesized the cyclic analogues of this alcohol and of the silicon hydrocarbon. Already in 1953 it was proved that after an interaction between the dimethylacetylenylcarbinol and the surplus of the Grignard-reagent the obtained derivative reacts with R_3SiCl . The first of the two varieties (explained by schemes) was preferred. The synthesis of the above mentioned compound for $R=CH_3$ was repeated and a series of its analogues was obtained. All of them were easily dehydrated with $KHSO_4$. The precise results of the spectral analysis with the above mentioned results are the reason for the suggestion of a (given) reaction scheme. The formation of compounds of an enol-type are a second confirmation of the structure. The obtained values are similar to those of the vinyl ethynylsilanes $R_3SiC \equiv C-CH=CH_2$. Furthermore 2 ways of synthesis are described. The synthesis of the ether $CH_3-C(CH_3)=CH-OSi(C_2H_5)_3$ was also successful. An isomeric tertiary alcohol $CH_3-C(CH_3)(OH)-CH=CH_2$ which formerly was considered to be an ether has here given constants. There is 1 table and 4 Slavic references.

ASSOCIATION

Institute for Organic Chemistry "N.D. Zelinskiy" of the A.N. of the
(Institut organicheskoy khimii im. N.D. Zelinskogo A.N. SSSR) USSR.

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AVAILABLE

March 3, 1957
Library of Congress

Card 2/2

PETROV, A. D., SADYKH-ZADE, S. I., and SHCHUKOVSKAYA, L. L.

"

"Acetylene ■ und Dien-Siliciumorganische Verbindungen,"

paper presented for the Symposium on Organic and Non-Siliceous Silicon Chemistry
Dresden, 12-14 May 1958.

AUTHORS: Soshukovskaya, L. D., Petrov, A. D. SOV/62-58-8-18/22

TITLE: The Synthesis of Silicon Containing Acetylene Alcohols
(Sintez kremnesoderzhashchikh atsetilennykh spirtov)

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk,
1958, No 8, pp. 1011-1014 (USSR)

ABSTRACT: Acetylene alcohols may be synthesized either by means of the
condensation of the ketones with acetylene or by their inter-
action with the Grignard reagent (according to Iotsich), as is
known. As is mentioned by the authors they produced ternary
acetylene alcohols in their preliminary work (Ref 3). In the
present paper they say, however, that after careful investi-
gation it was found that in tetrahydrofuran the reaction
 $\text{HC}\equiv\text{CMgX} + \text{R}_3\text{SiX} \rightarrow \text{R}_3\text{SiC}\equiv\text{CH} + \text{MgX}_2$ takes place with a good
yield of triethyl-silyl acetylene. Ternary silicon and fluorine
containing unsaturated alcohol (1-propene-2-triethyl-silyl-
3,3-methylfluoro-methyl-ol 3) were synthesized by the combination
of triethyl silane with methyl-trifluoro-methyl acetylenyl
carbide.

Card 1/1 There are 1 table and 3 references, 1 of which is Soviet.

SOV/62-58-9-18/22

The Synthesis of Silicon Containing Acetylene Alcohols

ASSOCIATION: Institut khimii silikatov Akademii nauk SSSR (Institute of the
Chemistry of Silicates, AS USSR)

SUBMITTED: March 11, 1958

Card 2/2

81600

S/062/60/000/04/06/006
B004/B066

53700

AUTHORS: Mironov, V. F., Shchukovskaya, L. L.
TITLE: Relative Reactivity of Some Alkenyl Silanes During Their
Interaction With Trichloro Silane

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh
nauk, 1960, No. 4, pp. 760 - 762

TEXT: According to Refs. 1 - 3, hydrosilanes were added to vinyl and allyl silanes under conditions which required the performance of the reaction in an autoclave. The authors used the catalyst of I. L. Speier (Ref. 4) ($0.1 \text{ N H}_2\text{PtCl}_6 \cdot 6\text{H}_2\text{O}$ in isopropanol). The reaction could thus be carried out at room temperature in a glass vessel. The relative reactivity was investigated by allowing equimolecular mixtures of allyl and vinyl silanes to react with an equivalent trichloro silane, and by determining the quantity of the reacting initial substance. The following was found: Vinyl trichloro silane reacted to 60%, allyl trichloro silane to 40% only; in the case of $\text{Cl}_3\text{SiCH=CH}_2$ and $(\text{C}_2\text{H}_5)_2\text{CH}_3\text{SiCH=CH}_2$.

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Relative Reactivity of Some Alkenyl Silanes
During Their Interaction With Trichloro
Silane

S/062/60/000/04/06/006
B004/B066

the former compound reacted to 23%, the latter to 77%; in the case of $\text{Cl}_3\text{SiCH}_2\text{CH}=\text{CH}_2$ and $(\text{CH}_3)_3\text{SiCH}_2\text{CH}=\text{CH}_2$, the former compound reacted to 60%, the latter to 40%. The accumulation of chlorine atoms at the silicon atom thus facilitates the addition of trichloro silane to allyl-substituted silane and inhibits this reaction in vinyl-substituted silane. A table presents the ten compounds synthesized for the first time and their physical data, among them α , ω -disilyl ethanes which were obtained by addition of hydride silanes to various vinyl silanes and by alkylation by means of RMgX or ArMgX . The authors refer to papers by A. V. Topchiyev et al. (Ref. 2) and A. D. Petrov et al. (Ref. 6). There are 1 table and 6 references: 3 Soviet, 1 Japanese and 2 American. X

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences, USSR), Institut khimii silikatov Akademii nauk SSSR (Institute of Silicate Chemistry of the Academy of Sciences, USSR)

SUBMITTED: August 19, 1959

Card 2/2

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SOV/79-30-2-77/78

AUTHORS: Petrov, A. D., Shchukovskaya, L. L.

TITLE: Letters to the Editor. Synthesis of Unsaturated Silicon Hydrocarbons

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol 30, Nr 2, p 700 (USSR)

ABSTRACT: The reaction of chloroprene with methyldichlorosilane in an evacuated tube at 550-600° yields a mixture of isomers of silicon hydrocarbons, consisting mainly of silicoallene and corresponding dimers. This was confirmed by elemental analysis and infrared spectra.

ASSOCIATION: Institute of Chemistry of Silicates of the Academy of Sciences of the USSR (Institut khimii silikatov Akademii nauk SSSR)

SUBMITTED: November 30, 1959

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Synthesis and reactions of...

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in the syntheses mentioned), as well as dialkyl diethynyl silanes of the type $R_2Si - (C \equiv CH)_2$. The medium used for the synthesis of nos. 1-4 and 12 (Table 1) was dry tetrahydrofuran, nos. 6-9 were produced in ether. The authors noticed the reduced value of the $C \equiv C$ vibration (at 2050 cm^{-1}) in the vibration spectra of monosubstituted silyl acetylenes which contained a triple bond in the α -position. According to their opinion, this effect is comparable to a similar reduction in vinyl silanes (Ref. 2). This effect is much less distinct in the spectra of di-substituted silyl acetylenes (Ref. 3). In the infrared spectrum of the acid $(C_2H_5)_3Si-C \equiv C-COOH$, the stretching vibrations of the hydroxyl correspond to broad bands near 2630 and 2508 cm^{-1} . The position of these bands characterized the strength of the hydrogen bonds and justifies the statement saying that this acid is somewhat stronger than saturated aliphatic acids (but weaker than dibasic acids). This conclusion was confirmed by a comparison of the dissociation constants of triethyl silyl ethynyl carboxylic acid and acetic acid. The authors thank A. N. Lazarev for taking an interpreting the spectra. There are 1 table and 4 references: 3 Soviet-bloc.

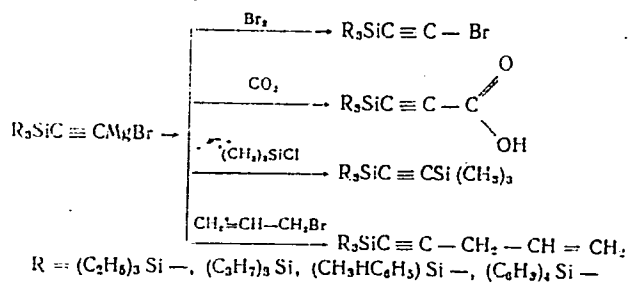
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Synthesis and reactions of...

SUBMITTED: November 28, 1960



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B103/B203

Synthesis and reactions of ...

Legend to Table 1: 1 - running number, 2 - synthesized compound, 3 - boiling point (no. 12 melting point), $^{\circ}\text{C}$, 4 - pressure, mm Hg, 5 - n_D^{20} , 6 - d_4^{20} , 7-8 - MRD , 7 - determined, 8 - calculated (according to Vogel), 9 - yield, %, (nos. 7 and 8 - referred to the reacted silicon hydrocarbon). Column 1, no. 12: unlike trialkyl silyl acetylenes, this compound is readily hydrolyzable with water, even in the cold, and forms $(\text{C}_6\text{H}_5)_3\text{SiOH}$ with the melting point at $152-164^{\circ}\text{C}$.

Таблица 1

№ п.п.	Соединение	Т. кип., $^{\circ}\text{C}$	Р, мм	n_D^{20}	d_4^{20}	MRD		Выход, %
						найд.	вычисл.	
1	$(\text{H}-\text{C}_6\text{H}_5)_3\text{SiC}\equiv\text{CH}$	97-97,5	20	1,4376	0,7380	50,95	60,59	77
2	$\text{CH}_3(\text{H})\text{C}_6\text{H}_5\text{SiC}\equiv\text{CH}$	92,5	42	1,5159	0,9169	48,17	48,59	59
3	$\text{C}_6\text{H}_5(\text{H})\text{C}_6\text{H}_5\text{SiC}\equiv\text{CH}$	90	47	1,5161	0,9161	52,76	52,87	58,5
4	$(\text{C}_6\text{H}_5)_2\text{Si}(\text{C}\equiv\text{CH})_2$	78-79	84	1,4393	0,8147	44,03	44,52	31
5	$(\text{H}-\text{C}_6\text{H}_5)_2\text{Si}(\text{C}\equiv\text{CH})_2$	77,5-78,5	15	1,4429	0,8094	58,71	53,82	—
6	$(\text{C}_6\text{H}_5)_2\text{SiC}\equiv\text{C}-\text{COOH}$	132,2-132,8	3	1,4682	0,9139	54,29	53,30	50
7	$(\text{H}-\text{C}_6\text{H}_5)_2\text{SiC}\equiv\text{C}-\text{Br}$	115,5-116	11	1,4740	1,0688	68,73	68,88	80
8	$\text{CH}_3(\text{H})\text{C}_6\text{H}_5\text{SiC}\equiv\text{C}-\text{CH}_2-\text{CH}=\text{CH}_2$	120,5-120,7	13	1,5280	0,9258	61,97	62,17	61,5
9	$\text{CH}_3(\text{H})\text{C}_6\text{H}_5\text{SiC}\equiv\text{C}-\text{Si}(\text{CH}_3)_3$	129-129,5	27	1,5039	0,8968	72,12	72,27	53
10	$(\text{CH}_3)_2(\text{H})\text{C}_6\text{H}_5\text{SiC}\equiv\text{C}$	166	6	1,5379	0,9840	87,30	87,22	—
11	$(\text{C}_6\text{H}_5)_2(\text{H})\text{C}_6\text{H}_5\text{SiC}\equiv\text{C}$	172-174	3	1,5508	0,9732	96,53	96,88	—
12	$(\text{C}_6\text{H}_5)_3\text{SiC}\equiv\text{CH}$	т. п.п. 48,5-49	1,5	—	—	—	—	—
1	2	3	4	5	6	7	8	9

Card 4/4

33988

S/062/62/000/002/013/013

B117/B138

5.2420
5.2410

AUTHORS: Shchukovskaya, L. L., Voronkov, M. G., and Pavlova, O. V.

TITLE: New method of N-dimethyl-B-difluoro borazene synthesis

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 2, 1962, 366

TEXT: The new method consists in the separation of hydrogen fluoride from N-dimethyl-B-trifluoro borazane heated with aluminum dust in vaseline oil medium. $C_2H_7NBF_3$ (boiling point 149 - 150°C (5 mm Hg), dry aluminum dust, and vaseline oil (boiling point 210 - 230°C (2 mm Hg)) were slowly heated in a distilling flask on Wood's alloy. At 278° hydrogen started separating energetically and the collecting vessel connected with the gasometer by way of a cooling trap rapidly filled with white brilliant N-dimethyl-B-difluoro borazane crystals. Owing to the vaseline oil the course of the reaction $6(CH_3)_2NH \cdot BF_3 + 2Al \rightarrow 6(CH_3)_2NBF_2 + 2AlF_3 + 3H_2$ was very smooth and easy to control. Yield of N-dimethyl-B-difluoro borazene: 85 - 88%. Some compounds of the type R_2NBF_2 , which are still being examined, were obtained in a similar

Card 1/2

New method of N-dimethyl-B-difluoro...

33988
S/062/62/000/002/013/013
B117/B138

manner. Hydrogen fluoride could not be separated from N-dimethyl-B-tri-fluoro borazane by heating with KF. There are 2 non-Soviet references. The two references to English-language publications read as follows: J. F. Brown, J. Amer. Chem. Soc. 74, 1219 (1952); A. B. Burg, J. Banus, J. Amer. Chem. Soc. 76, 3903 (1954).

ASSOCIATION: Institut khimii silikatov Akademii nauk SSSR (Institute of Silicate Chemistry of the Academy of Sciences USSR) ✓

SUBMITTED: August 10, 1961

Card 2/2

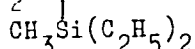
S/020/60/135/004/027/037
BC16/B066

AUTHORS: Shchukoyskaya, L. L., Petrov, A. D., Corresponding Member
AS USSR, and Lazarev, A. N.

TITLE: High-temperature Condensation of Chloroprene With Methyl
Silane Dichloride

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 135, No. 4, pp. 883-885

TEXT: The authors studied the high-temperature condensation of chloroprene with methyl silane dichloride: 1) at 550-580°C and 2) at 590-600°C. Ad 1) Two principal fractions: I (Boiling point 68.5 - 70°C/18 mm Hg) and II (88 - 90°C/0.5 mm Hg) were obtained by fractionation after treatment with C_2H_5MgBr . In one of these fractions the expected methyl diethyl silyl butadiene $CH_2=C(CH_3)Si(C_2H_5)_2-CH=CH_2$ was found. It contains at least 50% of allene isomer



and up to 5% chlorine. Chlorine was also contained in the dimer fraction: $[CH_3(C_2H_5)_2Si-CH=CH-CH=CH_2]_2$. Ad 2) Each of the 11 fractions obtained

Card 1/4

High-temperature Condensation of Chloroprene
With Methyl Silane Dichloride

S/020/60/135/004/027/037
B016/B066

was methylated and then fractionated. Only 5 fractions were studied:

Fraction	Boiling Point
A	111.5-113°C/748 mm Hg
B	71°/64 mm Hg
V	75°/30 mm Hg
	74°/28 mm Hg
G	86°/20 mm Hg
D	62-64°/3 mm Hg

In this case the yield of condensate was higher: up to 50 %, calculated for the chloroprene reacted. The reaction product could be methylated by CH_3MgBr . In addition to $\text{CH}_2=\text{C}[\text{Si}(\text{CH}_3)_2]-\text{CH}=\text{CH}_2$ (isomer mixture) the authors

isolated and identified styrene (10 % yield). They regard the latter fact as proof for a partial reduction of the chlorine of chloroprene and also for a dehydrogenation, as the styrene is apparently formed via the vinyl cyclohexene. But styrene could also have resulted via butadiene. The authors further isolated a disilane to which they ascribed the empirical formula $\text{C}_{10}\text{H}_{22}\text{Si}_2$ and a presumable structure: $(\text{CH}_3)_3\text{SiCH}=\text{CH}-\text{CH}=\text{SHSi}(\text{CH}_3)_3$, which however, could not be confirmed. The disilane was probably formed according

Card 2/4

High-temperature Condensation of Chloroprene
With Methyl Silane Dichloride

S/020/60/135/004/027/037
B016/B066

to the scheme: $(\text{CH}_2=\underset{\text{Si}(\text{CH}_3)_3}{\text{C}}-\text{CH}=\text{CH}_2)_2 \longrightarrow \text{C}_4\text{H}_6 + (\text{CH}_3)_3\text{SiCH}=\text{CH}=\text{CHSi}(\text{CH}_3)_3 \quad (\text{I})$

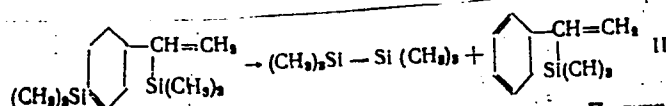
But its spectrum is in contradiction with this formula. This disilane adds both 2 and 4 bromine atoms. The fraction D much resembled the α -trimethyl silyl vinyl cyclohexadiene (see the terminal member of the attached scheme II), it may be formed according to this scheme. R. I. Pal'chik took part in the experimental section of this paper. There are 2 Soviet references.

ASSOCIATION: Institut khimii silikatov Akademii nauk SSSR (Institute of Silicate Chemistry of the Academy of Sciences USSR)

SUBMITTED: August 18, 1960

Card 3/4

S/020/60/135/004/027/037
B016/B066



✓

Card 4/4

20639

5.3700

2209, 1164, 1273

S/O20/61/136/006/015/024
B'03/B203

AUTHOR: Shchukovskaya, L. L., Pal'chik, R. I., and Petrov A. D.,
Corresponding Member AS USSR

TITLE: Synthesis and reactions of acetylene silicon hydrocarbons

PERIODICAL: Doklady Akademii nauk SSSR, v. 156, no. 6, 1961, 1354-1356

TEXT: The authors continued their studies of the synthesis of acetylene silicon hydrocarbons (Ref. 1). From triethyl silyl acetylene $(C_2H_5)_3SiC \equiv CH$ they easily obtained the organomagnesium compound $(C_2H_5)_3Si \equiv CMgBr$ which can react with carbonyl compounds. In the present study, the authors proceeded according to the enclosed scheme. They synthesized alkyl- and alkyl-aryl-silyl monacetylene hydrocarbons of the type $— Si — C \equiv CH$, further some derivatives of the type $— Si — C \equiv C — X$ (where $X = Br, COOH$, and others), of the disubstituted monacetylene hydrocarbons of the type $— Si — C \equiv C — Si —$ (forming in small amounts

Card 1/ 4

SHCHUKOVSKAYA, L.L.; VORONKOV, M.G.; PAVLOVA, O.V.

New methods of synthesizing β -monohalo-substituted N-dialkylborazines and N-trialkylborazanes. Dokl. AN SSSR 143 no.4: 887-889 Ap '62. (MIRA 15:3)

1. Institut khimii silikatov AN SSSR. Predstavleno akademikom A.V.Topchiyevym.

(Borazane) (Borazine)

SHCHUKOVSKAYA, L.L.; USHAKOV, S.N.; GALANINA, N.K.

Synthesis of halogenated acetaldehyde hydrates. Izv. AN SSSR. Otd. khim.
nauk. no. 9: 1692-1693 S '62. (MIRA 15:10)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.
(Acetaldehyde)

SHCHUKOVSKAYA, L.L.; PAL'CHIK, R.I.

Synthesis of trimethylsiloxycetylene. Izv. AN SSSR. Ser. khim.
no.8:1556 Ag '64. (MIRA 17:9)

1. Institut khimii silikatov im. I.V. Grebenshchikova AN SSSR.

L 25271-65 EWT(m)/EPF(c)/EWP(j)/T Pc-4/Pr-4 RM

ACCESSION NR: AP5001602

S/0062/64/000/012/2228/2230

21
19
B

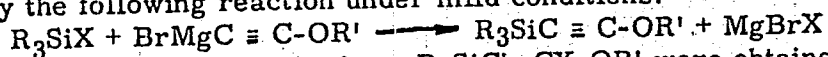
AUTHOR: Shchukovskaya, L. L.; Pal'chik, R. I.

TITLE: Synthesis of trialkylsilylalkoxyacetylenes and alpha-bromo-beta-trialkyl-silylvinyl ethers

SOURCE: AN SSSR. Ozvestiya. Seriya khimicheskaya, no. 12, 1964, 2228-2230

TOPIC TAGS: trialkylsilylalkoxyacetylene, silylalkoxyacetylene derivative, alkylsilylvinyl ether, synthesis, acetylenic silane derivative

ABSTRACT: A new class of compounds, exemplified by trimethylsilylethoxyacetylene, trimethylsilylbutoxyacetylene and triethylsilylethoxyacetylene was synthesized by the following reaction under mild conditions:



The corresponding halovinyl ethers $R_3SiCH=CX-OR'$ were obtained by reaction of the above Grignard complex with 20% NH_4Cl solution. These -bromo- -trialkyl-silylvinyl ethers were hydrolysed, by dropwise addition to ice water, to the cor-

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L 25271-65

ACCESSION NR: AP5001602

2

responding trialkylsilylacetates. Under the hydrolysis conditions $(\text{CH}_3)_3\text{SiCH}_2\text{COOC}_2\text{H}_5$ and $(\text{CH}_3)_3\text{SiCH}_2\text{COOC}_4\text{H}_9$ underwent rupture of the Si-C bond: $2(\text{CH}_3)_3\text{SiCH}_2\text{COOR} + 2\text{H}_2\text{O} \rightarrow [(\text{CH}_3)_3\text{Si}]_2\text{O} + 2\text{CH}_3\text{COOR}$. Physical properties and IR spectral data were obtained for the compounds. "Spectra were obtained and interpreted by A. N. Lazarov." Orig. art. has: 1 table and 3 equations.

ASSOCIATION: Institut khimii silikatov im. I. V. Grebenshchikova Akademii nauk SSSR (Institute of Silicate Chemistry Academy of Sciences SSSR)

SUBMITTED: 04May64

ENCL: 00

SUB CODE: OC, GC

NR REF SOV: 002

OTHER: 000

Card 2/2

ARCHENKOVSKAYA, L.I.; PAVLOV, B.I.

Order of addition of trialkylsilanes to propargyl alcohol. 7th.
obz. khim. 35 no.6:1122 Ja '65. (MIRA 18:6)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.

L 39437-65 EPF(c)/EPR/EWP(j)/EWT(m) Pc-4/Pr-4/Ps-4 RPL RM/WW

ACCESSION NR: AP5005894

S/0020/65/160/003/0621/0624

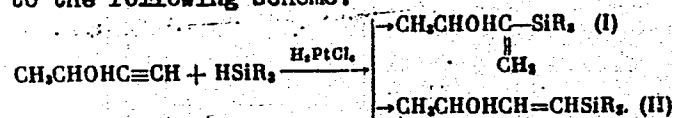
AUTHORS: Shchukovskaya, L. L.; Pal'chik, R. I.; Petrov, A. D. (Corresponding member AN SSSR) (Deceased)

TITLE: The order of adding trialkysilanes to unsaturated alcohols

SOURCE: AN SSSR. Doklady, v. 160, no. 3, 1965, 621-624

TOPIC TAGS: silane, alcohol, IR spectrum

ABSTRACT: The authors have demonstrated that trialkysilanes may be added to dimethylethynyl carbonyl and methyltrifluoromethylethynyl carbonyl in two directions according to the following scheme:



The IR spectra are given for the two pairs of alcohol isomers corresponding to these two directions. In each pair, both isomers are identified by bands of valence oscillations of CH in the groups C-CH₂ or CH=CH. In the latter case the band of CH=CH at about 3000 cm⁻¹ proves to be on the slope of the bands of the

Card 1/2

L 39437-65

ACCESSION NR: AP5005894

groups CH_3 and C_2H_5 . The frequency of the bands of associated hydroxides (higher in the tertiary alcohols than in the secondary) is shifted toward the long waves in isomers containing the OH in the γ -position toward silicon. This shift is greater than in isomers with OH in the β -position. The position of C-C-oscillation in spectra of the isomers changes from $1620\text{--}1630\text{ cm}^{-1}$ for the groups CH=CH to 1600 cm^{-1} in the groups C=CH_2 . The structure of the adducts obtained was verified by reverse synthesis. The various syntheses and products are described briefly, with summaries of their IR spectra, properties, and dimensions. Orig. art. has: 2 figures.

ASSOCIATION: Institut khimii silikatov im. I. V. Grebenshchikova Akademii nauk SSSR (Institute of the Chemistry of Silicates, Academy of Sciences SSSR)

SUBMITTED: 21May64

ENCL: 00

SUB CODE: 00

NO REF SOV: 004

OTHER: 001

Card 2/2

L 4288-66 EWT(m)/EPF(c)/EMP(j)/T RM

ACCESSION NR: AP5024004

UR/0020/65/164/002/0357/0360

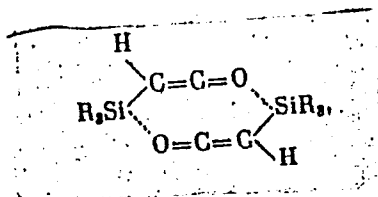
AUTHOR: Shchukovskaya, L. L.; Pal'chik, R. I.; Lazarev, A. N.

TITLE: Synthesis and reactions of trimethylsilylketene-trimethylsiloxycetylene

SOURCE: AN SSSR. Doklady, v. 164, no. 2, 1965, 357-360

TOPIC TAGS: organosilicon compound, chemical bonding, conjugate bond system

ABSTRACT: Trimethylsilylalkoxyacetylenes decompose at 120 - 130C to yield the corresponding olefin and trimethylsilylketene $(CH_3)_3SiCH=C=O$. The NMR and IR spectra of the product indicate that the ketene formed partially isomerizes into the corresponding acetylene, probably via an intermediate complex with a pentacovalent silicon, e. g.,

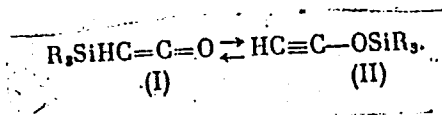


Card 1/4

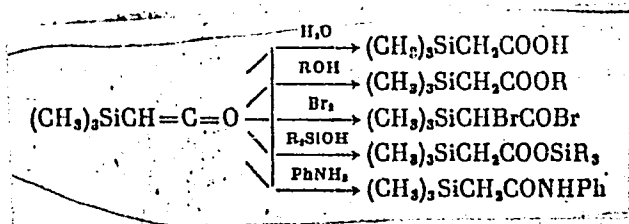
L 4208-66

ACCESSION NR: AP5024004

i. e., the following tautomeric equilibrium exists:



IR spectra of the equilibrium mixture $(\text{CH}_3)_3\text{SiCH}=\text{C}=\text{O} \rightleftharpoons (\text{CH}_3)_3\text{SiO}-\text{C}\equiv\text{CH}$ were recorded, and the conjugation of the Si-O and $\text{C}\equiv\text{C}$ bonds was deduced (see Fig. 1 of the Enclosure). In the additions reactions studied, the compound reacted in the ketene form as follows:



Card 2/4

L 4288-66

ACCESSION NR: AP5024004

"The authors thank A. S. Khachaturov for taking the NMR spectra." Orig. art. has:
2 figures and 1 table. 44, 55

ASSOCIATION: Institut khimii silikatov im. I. V. Grebeshchikova Akademii nauk SSSR
(~~Institute of Silicate Chemistry, Academy of Sciences, SSSR~~) 44, 55

SUBMITTED: 16Feb65

ENCL: 01

SUB CODE: OC, 6C

NO REF SOV: 005

OTHER: 004

Card 3/4

L 4288-66

ACCESSION NR: AP5024004

ENCLOSURE: 01

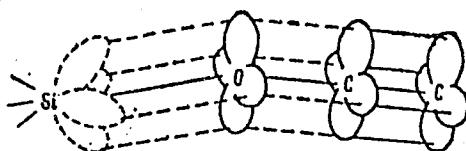


Figure 1. Conjugation of Si-O and C≡C bonds (schematic representation).

Card 4/4 *DP*

1. Institut khimii silikatov im. I.V. Grebenshchikova AN SSSR.

Order of addition of trialkylsilanes to unsaturated alcohols.
Izvi. AN SSSR 160 no.2:621-624 Ju '65.

(Izba 17:3)

1. Institut khimii silikatov im. I.V. Grebenshchikova AN SSSR.
2. Sten-korrespondent AN SSSR (for Petrov).

USSR / Human and Animal Physiology (Normal and Pathological).
General Problems.

T-1

Abs Jour : Ref Zhur - Biologiya, No 13, 1958, No. 59963

Author : Shchukuryan, K. G.; Tovmasyan, R. A.; Tarverdyan, A. N.
Inst : Republican Clinical Hospital of ArmSSR
Title : Several Data on the Effect of the Irritation of the
Vestibular Analyzer Upon the Secretory Function of the
Stomach

Orig Pub : Sb. nauchn. tr. Resp. klinich. bol'nitsy ArmSSR, 1957,
1, 529-531

Abstract : After rotation in the Barany chair with a speed of 10
rev/20 sec., a parasympathetic effect appeared in 23
and 38 subjects (increase in the quantity of gastric
secretion and the content of total, free and bound HCl),
in 7 persons a sympathetic effect was observed (decrease
in secretion and acidity), and in the remaining ones
there was no reaction to the rotation. -- T. G. Beteleva

Card 1/1

KARPOV, A.A., inzh.; KUSTOBAYEV, G.G., inzh.; LAUSHKIN, N.P., inzh.;
LANGE, Z.I., inzh.; NOSYREVA, M.D., inzh.; SAVEL'YEV, G.V., inzh.;
SHCHULEPNIKOV, I.S., inzh.; Primali uchastiye: SYCHKOV, B.A., inzh.;
MILIKHIN, A.Ye., inzh.; ZAYTSEV, R.A., inzh.; ZARZHITSKIY, Yu.A.,
inzh.; LEONT'YEV, A.I., inzh.; VIKTOROVA, T.Ye., inzh.; SERIKOV, A.A.,
inzh.

Operation of recuperator soaking pits in the 1150 MMK rolling
mill. Stal' 22 no.8:753-758 Ag '62. (MIRA 15:7)

1. Magnitogorskiy metallurgicheskiy kombinat.
(Furnaces, Heating) (Rolling mills)

54011-50000 11 11 N
S/081/51/000/023/015/061
5117/B147

AUTHORS: Alimarin, I. P., Yakovlev, Yu. V., Shulepnikov, M. N.,
Pereroghin, G. P.

TITLE: Determination of small amounts of impurities in thallium,
thallium, phosphorus, and antimony by the method of radio-
activation analysis

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 23, 1961, 128, abstract
23D97 (Sb. "Radioakt. izotopy i yadern. izlucheniya v nar.
kh-ve SSSR. v. I". M., Gostoptekhizdat, 1961, 293 - 297)

TEXT: A comparison was made between the radiochemical and spectroscopic
variants of the activation analysis. General schemes of the radiochemical
separation of impurities in the determination of Cu, Zn, As, Au, and P in
thallium and of Mn, Cu, Zn, Ga, As, P, and Cr in antimony, as well as the
main γ -spectra in the determination of Mn, Zn, Cu, Cs, and Sb in thallium
and of As, Mn, and Ga in phosphorus are presented. [Abstracter's note:
Complete translation]

ALIMARIN, I.P.; YAKOVLEV, Yn.V.; SHCHULEPNIKOV, M.N.; VLASOV, D.A.;
CHERNOV, G.M.; SURKOV, Yn.A.

Radioactive determination of impurities in high purity
thallium. Zhur.anal.khim. 16 no.2:213-216 Mr-Apr '61. (MIRA 14:5)

1. Vernadsky Institute of Geochemistry and Analytical Chemistry,
Academy of Sciences U.S.S.R., MOSCOW.
(Thallium--Analysis)

L 54980-65 EWT(m)/EWP(i)/EPF(c)/EWA(d)/EWP(t)/EWP(b) IJP(c) JD/JG/WB
 ACCESSION NR: AP5007630 S/0365/65/001/001/0122/0123
 620.197.2

AUTHOR: Tomashov, N. D.; Shchulepnikov, M. N.; Ivanov, Yu. M.

TITLE: Radiochemical study of the mechanism of the protective action of palladium in corrosion-resistant titanium-palladium alloys

SOURCE: Zashchita metallov, v. 1, no. 1, 1965, 122-123

TOPIC TAGS: titanium alloy, palladium containing alloy, corrosion resistance, neutron bombardment

ABSTRACT: An alloy of ²¹titanium with 0.1% ²¹palladium, prepared from TGO sponge (0.08% Fe, 0.03% Si) was studied to determine whether treatment with HCl enriches the surface of the sample with palladium. Annealed samples, half of which were treated with boiling 5% HCl for 30 min, were exposed for 20 hr. to a flux of slow neutrons ($1.3 \times 10^{13} \text{ cm}^{-2} \text{ sec}^{-1}$). The Pd^{108} isotope was thus converted to the radioisotope Pd^{109} . The samples and the controls (not subjected to the action of HCl) were treated with aqua regia, Pd was precipitated with dimethylglyoxime, and the precipitate was analyzed with a gamma spectrometer, which showed the presence

Card 1/2

L 54980-65

ACCESSION NR: AP5007630

3
of Pd¹⁰⁹. Thus, it was found that the treatment of the Ti-0.1% Pd alloy with HCl increased the amount of palladium at the surface of the sample by a factor of at least 75 relative to the untreated sample. An approximate calculation based on the assumption that palladium is present as a monolayer showed that about 20% of the surface of the sample becomes covered with palladium when treated with HCl. Orig. art. has: 1 figure.

ASSOCIATION: Institut fizicheskoy khimii, Akademiya nauk SSSR (Institute of Physical Chemistry, Academy of Sciences, SSSR); Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut redkometallicheskoj promyshlennosti (State Scientific Research and Planning Institute of the Rare Metal Industry)

SUBMITTED: 15Sep64

ENCL: 00

SUB CODE: NM

NO REF SOV: 005

OTHER: 000

Card 2/2

TOMASHOV, N.D.; SHCHULEPNIKOV, M.N.; IVANOV, Yu.M.

Investigating the mechanism of the protective action of palladium in corrosion-resistant titanium-palladium alloys by the radio-chemical method. Zashch.met. 1 no.1:122-123 Ja-F '65.

(MIRA 18:5)

1. Institut fizicheskoy khimii AN SSSR i Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut redkometallicheskey promyshlennosti.

SHCHULEPNIKOVA, A.G.

127-12-19/28

AUTHORS: Shchulepnikova, A.G. and Kuznetsov, S.N., Engineers

TITLE: Increase of Durability of Mining Machinery Parts by Hardening them in the Oxygen-Acetylene Flame (Povysheniye iznosostoykosti detaley gornogo oborudovaniya zakalkoy kislородno-atsetilenovym plamenem)

PERIODICAL: Gornyy Zhurnal, 1957, No 12, pp 65-66 (USSR)

ABSTRACT: The gas-flame surface hardening method has been in use in the Magnitogorsk Mining Machinery Plant since 1951. The introduction of this method made it possible to increase considerably the number of machine parts subjected to hardening. Acetylene is generated by a 10 m³/hour generator of the "TPK 10-48" type. Oxygen is supplied from gas cylinders. The microstructure of the hardened layer is martensite or troostite with martensite; its hardness is 50 to 60 Rc. The annealing of small-size parts can be performed in the annealing furnaces at 180 to 200° C. The hardness after hardening and annealing is 45 to 55 Rc.

Card 1/2 The article contains 2 figures and 1 table.

ZAMORUYEV, G.M. [deceased], prof., doktor tekhn, nauk; SHULEPNIKOVA, A.G.,
assistant

Changes in surface layers of steel caused by abrasive wear. Izv.
vys.ucheb.zav.; mashinostr. no.7:45-50 '59. (MIRA 13:6)

1. Magnitogorskiy gorno-metallurgicheskiy institut.
(Mechanical wear) (Steel--Metallography)

SHULEPNIKOV, A.G.; YUDIN, I.K.

Resistance of deposited metal to abrasive wear. Izv. vus. ucheb.
zav.; chern. met. 4 no.8:120-124 '61. (MIRA 14:9)

1. Magnitogorskiy gorno-metallurgicheskiy institut.
(Hard facing) (Mechanical wear)

SHCHULEPNIKOVA, A.G.

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SHCHULEPNIKOVA, A.G., inzh.

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obr. met. no.10:5-8 0 '62. (MIRA 15:10)

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(Steel—Metallography) (Mechanical wear)

SHCHULEPNIKOVA, A.G.; IVANTSOV, G.I.

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EXCERPTA MEDICA Sec 6 Vol 13/0 Internal Med Sent 50

5314. THE USE OF 'DIOKHIN' IN THE TREATMENT OF PEPTIC ULCERATION
(Russian text) - Shchulutko I. B., Tolmach D. V. and Shklovskaya E. N. - VRACH, DELO 1957, 9 (897-900)

A series of 25 cases of gastric and duodenal ulceration treated with 'diokhin' (a Soviet ganglion-blocking agent) is described. Its effects include blockage of impulse transmission in the ganglia of the vegetative nervous system and inhibition of vascular and smooth muscle spasms of various organs. The dose used was 0.1 g. 3 times a day, 1 hour after meals for 20-25 days. Improvement was apparent within the first few days, with diminished pain, diminished dyspeptic symptoms, improved appetite and sleep. Roentgenologically the ulcer crater disappeared in 10 and greatly diminished in size in 8 patients. The drug had no effect on gastric secretory activity, while normalization of gastric motility was observed. (S)

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 ASTVATSATUROV, G.G., inzhener; BISNOVATYY, S.I., inzhener; BONDAREN-
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 inzhener; LIVSHITS, L.G., kandidat tekhnicheskikh nauk; LIBERMAN, A.R.,
 inzhener; LINNIK, Ye.M., inzhener; LUKANOV, M.A., inzhener; MOROZOV,
 S.A., inzhener; POGORELYY, I.P., kandidat tekhnicheskikh nauk; PETROV,
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(BODY TEMPERATURE) (CONDITIONED RESPONSE)

FD-2190

USSR/Medicine - History

Card 1/1 Pub 102-10/15

Author : Shchupak, B. N. (Kamchatskaya Oblast)

Title : Medical aid in the days of heroic defense of Petropavlovsk (Kamchatka)
 (Centennial)

Periodical : Sov, zdrav., 3, 47-52, May-June, 1955

Abstract : Review of the 1850-1855 events, including French-English-American in-
 tervention. Underlines medical care and facilities, heroism of medical
 personnel during the period.

Institution : —

Submitted : November 18, 1954

KESEL', Ya.V., mayor meditsinskoy sluzhby: SHCHUPAK, B.N., starshiy
leytenant meditsinskoy sluzhby

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